

**FEE TRANSMITTAL**

Patent fees are subject to annual revision.



Complete If Known	
Application Number	10/082,360
Filing Date	26 February 2002
First Named Inventor	HYUN KIM
Examiner Name	GIBBS, HEATHER D.
Group/Art Unit	2625

TOTAL AMOUNT OF PAYMENT	(\$) <u>500.00</u>	Attorney Docket No.	P56639
-------------------------	--------------------	---------------------	--------

**METHOD OF PAYMENT (check one)****1. ■ Payment Enclosed:  
(CHECK #52565)**

Check  Credit Card  Money Order  
 Other

 Charge Any Additional Fee Required Under 37 C.F.R. §1.16 and 1.17. Applicant claims small entity status. See 37 CFR 1.27**2. ■ The Commissioner is hereby authorized to charge any deficiency and credit any over payments to:**Deposit Account Number: 02-4943**FEES CALCULATION**

Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid	
<b>EXTENSION OF TIME FEES</b>				
1251	120	2251	60	Extension for reply within first month \$
1252	450	2252	225	Extension for reply within second month \$
1253	1020	2253	510	Extension for reply within third month \$
1254	1590	2254	795	Extension for reply within fourth month \$
1255	2160	2255	1080	Extension for reply within fifth month \$
<b>APPEAL</b>				
1401	500	2401	250	Notice of Appeal \$
1402	500	2402	250	Filing a brief in support of an appeal \$ 500.00
1403	1000	2403	500	Request for oral hearing \$
<b>CLAIMS</b>				
1201	200	2201	100	Independent claims in excess of 3 \$
1202	50	2202	25	claims in excess of 20 \$
Other Fee (specify) _____ \$				
Other Fee (specify) _____ \$				
Other Fee (specify) _____ \$				
<b>SUBTOTAL: LEFT COLUMN</b>		\$500.00	<b>SUBTOTAL: RIGHT COLUMN</b>	
<b>Complete (If applicable)</b>				

Typed or Printed Name

Robert E. Bushnell, Esq.

Reg. Number

27,774

Signature

Date

21 May 2007

Deposit Account User ID

REB/nm

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

Appeal No. \_\_\_\_\_

In re Application of:

HYUN KIM

Serial No.: 10/082,360                      Examiner: GIBBS, HEATHER D.

Filed: 26 February 2002                      Art Unit: 2625

For: METHOD AND APPARATUS FOR CORRECTING SCANNING ERROR IN FLATBED SCANNER

Attn: Board of Patent Appeals & Interferences

TRANSMITTAL OF APPELLANT'S BRIEF FEE

**Mail Stop Appeal Brief-Patents**

Commissioner for Patents  
P.O.Box 1450  
Alexandria, VA 22313-1450

Sir:

Accompanying this transmittal is a check drawn to the Commissioner of Patents & Trademarks in the amount of \$500.00 (Check #52565) for the filing an **Appeal Brief** in support of a Notice of Appeal filed on 22 March 2007, along with a Petition for a one-month extension of time. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

  
\_\_\_\_\_  
Robert E. Bushnell  
Attorney for Applicant  
Reg. No.: 27,774

1522 "K" Street, N.W., Suite 300  
Washington, D.C. 20005  
Area Code: 202-408-9040  
Folio: P56639  
Date: 5/21/07  
I.D.: REB/nm



PATENT  
P56639

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

Appeal No. \_\_\_\_\_

In re Application of:

HYUN KIM

Serial No.: 10/082,360

Examiner: GIBBS, HEATHER D.

Filed: 26 February 2002

Art Unit: 2625

For: METHOD AND APPARATUS FOR CORRECTING SCANNING ERROR IN  
FLATBED SCANNER

Attn: Board of Patent Appeals & Interferences

Paper No. 13

**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O.Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to Appellant's Notice of Appeal filed on 22 March 2007, Appellant hereby appeals to the Board of Patent Appeals and Interferences from the rejection of claims 1-3, 5, 9-16, 19 and 21-28 as set forth in the Advisory Action mailed on 19 March 2007 (Paper No. 20070315).

Folio: P56639

05/22/2007 YPOLITE1 00000018 10082360

Date: 5/21/07

01 FC:1402

500.00 OP

I.D.: REB/HMZ/kf



PATENT  
P56639

## TABLE OF CONTENTS

	<i>Page</i>
IDENTIFICATION .....	i
TABLE OF CONTENTS .....	ii
I. REAL PARTY IN INTEREST .....	1
II. RELATED APPEALS AND INTERFERENCES .....	2
III. STATUS OF CLAIMS .....	3
IV. STATUS OF AMENDMENTS .....	4
V. SUMMARY OF CLAIMED SUBJECT MATTER .....	5
VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL .....	8
VII. ARGUMENT .....	9
VIII. CLAIMS APPENDIX .....	24
IX. EVIDENCE APPENDIX .....	29
X. RELATED PROCEEDINGS APPENDIX .....	30



PATENT  
P56639

**I. REAL PARTY IN INTEREST**

Pursuant to 37 CFR §41.37(c)(1)(as amended), the real party in interest is:

Samsung Electronics Co., Ltd.  
#416, Maetan-dong, Yeongtong-gu  
Suwon-si, Gyeonggi-do, Republic of KOREA

as evidenced by the Assignment executed by the inventor(s) on 4 March 2002 and recorded by the U.S. Patent and Trademark Office on 29 March 2002 at Reel 012741, Frame 0215.

## **II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals and no interferences known to Appellant, Appellant's legal representatives or the assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

### **III. STATUS OF CLAIMS**

Claims 1-3, 5, 9, 11-16, 19-24, and 27 have been rejected under 35 U.S.C. §102 as anticipated by Tsai (U.S. Patent No. 6,734,998).

Claims 4, 6-8, 17, 18, 20, 26, 27, and 29-34 have been objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, no further comments on these claims will be included in this Appeal Brief.

**IV. STATUS OF AMENDMENTS**

Both the Amendment Under 37 C.F.R. §1.111, filed January 17, 2006, and the Amendment Under 37 C.F.R. §1.111, filed October 2, 2006, have been entered.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to a method and apparatus for correcting a scanning error in a flatbed scanner, the scanning error being due to a deviation in the position of a charge-coupled device module of the flatbed scanner.

More particularly, Figure 1 and paragraphs [0021]-[0023] specifically illustrate and discuss the flatbed scanner to which the present invention is applied.

Figure 2 and paragraphs [0024]-[0026] specifically illustrate and discuss the elements of an embodiment of the apparatus of the present invention. In more detail, an apparatus in accordance with an embodiment of the present invention includes a transparent glass through which a CCD module scans a document and a white shading plate including a black patch. A buffer stores the image scanned by the CCD module after being corrected by the controller in conjunction with the memory storing information of the black patch scanned by the CCD module and predetermined reference values.

Figure 3 and paragraphs [0028]-[0030] specifically illustrate and discuss the steps of an embodiment of the present invention. In more detail, the CCD module is moved to its home position and then warmed up for a predetermined period of time. The CCD module is then moved to the white shading plate to perform a scan on the white shading plate including the black patch contained therein. The results of the scan of the black patch by the CCD module

is then compared with reference values to determine the error corrected scanning region, scanning position, and scanning rate.

Figure 4 and paragraphs [0031]-[0051] specifically illustrate and discuss in more detail the operating steps of an embodiment of the present invention. More particularly, steps 401-406 correct the scan storage line, steps 407-412 correct the first pixel, steps 413-418 correct skew, and steps 419-422 adjust the scan rate.

With regard to the claims, the subject matter of claims 1 and 15 is disclosed in Figures 1-3 and their corresponding description.

The subject matter of claim 22 is also disclosed in Figures 1-3 and their corresponding description. Claim 22 will be argued separately from claims 1 and 15.

Claims 2 and 16 are disclosed in steps 401-406 of Figure 4 and their corresponding description. These claims will be argued separately from the claims noted above.

Claim 3 is disclosed in steps 407-412 of Figure 4 and their corresponding description. This claim will be argued separately from the claims noted above.

Claims 5 and 19 are disclosed in steps 413-418 of Figure 4 and their corresponding

description. These claims will be argued separately from the claims noted above.

Claims 9, 10, and 21 are disclosed in steps 419-422 of Figure 4 and their corresponding description. These claims will be argued separately from the claims noted above.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-3, 5, 9, 11-16, 19-24, and 27 have been rejected under 35 U.S.C. §102 as anticipated by Tsai (U.S. Patent No. 6,734,998).

Accordingly, the only grounds of rejection to be reviewed on appeal is whether claims 1-3, 5, 9, 11-16, 19-24, and 27 are anticipated by Tsai.

## VII. ARGUMENT

It is first noted that in rejecting the claims, the Examiner has alleged that claim 1 is representative of claims 15 and 22.

Appellant disagrees with the Examiner in that while claim 1 is representative of claim 15, claim 22 recites “the respective reference value set according to the pattern of said black patch”. This additional limitation of claim 22 is not contained in either claims 1 or 15.

Accordingly, claims 1 and 15 are patentably distinct from claim 22 in that the predetermined reference value recited therein may be according to something other than the pattern of said black patch, for example, the size or location of the black patch.

Furthermore, the Examiner has alleged that claim 2 is representative of claims 16 and 27.

Appellant disagrees with the Examiner in that while claim 2 is representative of claim 16, the Examiner has previously stated that claim 27 would be allowable if rewritten in independent form so as to include all of the limitations of the base claim and any intervening claims. Therefore, claim 27 is patentably distinct from claims 2 and 16.

Similarly, Appellant disagrees with the Examiner with regard to claim 3 being

representative of claim 20 since the Examiner has also stated that claim 20 would be allowable if rewritten in independent form so as to include all of the limitations of the base claim and any intervening claims. Therefore, claim 3 is patentably distinct from claim 20.

Still furthermore, the Examiner has alleged that claim 5 is representative of claim 19.

Appellant disagrees with the Examiner in that claim 19 includes the recitation: “the scanning error is corrected by setting a scan region according to the result of comparing the position at which the first pixel is read with a predetermined reference value during the correction of the scanning error”. Claim 5 does not include such a comparison limitation.

Accordingly, claim 5 is distinct from claim 15 in that the scan region can be set without comparing the position at which the first pixel is read with a predetermined reference value.

### **Claims 1 and 15**

With regard to claims 1, 15, and 22, the Examiner states: “For claim 1, which is representative of claims 15 and 22, Tsai teaches an apparatus for correcting a scanning error in a flatbed scanner, the apparatus comprising: a white shading plate having a black patch (Col 2 Lines 57-59); a reading module accommodating reading of said white shading plate and said black patch (Col 2 Lines 53-57); and a controller comparing information of said black patch read by said reading module with a predetermined reference value to correct the scanning error

in the flatbed scanner (Col 2 Lines 64-Col 3 Lines 15 and Col 4 Lines 45-56).”

As recited in independent claims 1 and 15, the present invention is directed to an apparatus and method for correcting a scanning error in a flatbed scanner.

For example, claim 1 recites: “a controller comparing information of said black patch read by said reading module with a predetermined reference value to correct the scanning error in the flatbed scanner” (emphasis added).

Similarly, claim 15 recites: “correcting the scanning error [in the flatbed scanner] according to the result of comparing the detected information related to said black patch with a predetermined reference value” (emphasis added).

On the other hand, Tsai relates to a method for determining scan line misalignments. Tsai does not teach or suggest or even consider correcting scanning errors after errors have been detected.

For example, lines 27-29 of column 1 of Tsai states: “if a missed scan line 12 is observed by the testing personnel, the scanner is returned to the factory for adjustments” (emphasis added).

Furthermore, lines 11-13 of column 2 of Tsai states: "It is an advantage that the present invention can detect scan line misalignments with sub-pixel accuracy, thus fulfilling the more rigid requirements for high-level scanners."

Thus, Tsai only detects scan line errors and does not correct scan line errors as recited in the present claims.

As to the Examiner's Response to Arguments contained in section 1 bridging pages 2 and 3 of the Office Action, the Examiner has cited sections of Tsai which do not support the Examiner's arguments.

For example, the Appellant has argued that the black path is in a separate document to be scanned (see Fig. 3 of Tsai). In response thereto, the Examiner has cited lines 57-63 of column 2 of Tsai which in fact supports the Appellant's arguments in that it refers to a document 36 having a white background and a black bias 37.

Furthermore, the Appellant has argued that in Tsai, the top edge line is not necessarily used as P1,P2,P3 is a boundary point between the black and white region in general, but does not necessarily look at from a top edge line. In response thereto, the Examiner argues that this means that the top edge line can be used as boundary point between the black-and-white regions. The Examiner is used in the wrong criterion here in that it is settled patent law that

merely because an element can be used in a specific fashion does not mean that it would be obvious to do so.

In a similar fashion, lines 5-15 of column 3 and lines 22-31 of column 1 of Tsai do not support the arguments raised by the Examiner. Additionally, the last two citations of Tsai also do not support the arguments raised by the Examiner.

As to the specific points repeated by the Examiner in the rejection of the claims, the arguments previously presented are still valid and follow below.

For claim 1, which is allegedly representative of claims 15 and 22, the Examiner states that Tsai teaches an apparatus for correcting a scanning error in a flatbed scanner, the apparatus comprising: a white shading plate having a black patch (Col 2 Lines 57-59); a reading module accommodating reading of said white shading plate and said black patch (Col 2 Lines 53-57); and a controller comparing information of said black patch read by said reading module with a predetermined reference value to correct the scanning error in the flatbed scanner (Col 2 Lines 64 - Col 3 Lines 15 and Col 4 Lines 45-56).

However, respectfully, the black patch in Tsai is from a document to be scanned, while in the present invention the black patch is included the white shading plate.

In Tsai, the black patch is in a separate document to be scanned as seen for example in col. 2, lines 57-59, “For a preferred embodiment of the present invention, the document 36 has a white background with a test pattern that is a black bias 37.” Furthermore, as seen figure 3 of Tsai, the black bias 37 is on the separate document 36 that is not a part of the scanning unit itself. In addition, as seen in col. 4, lines 62-63, in step 52, Tsai states to “Scan the black bias 37 on the document 36, and then collect the corresponding image information from the scan lines.” Furthermore, as seen in col. 6, lines 30-33, Tsai states “scanning a document having a test image and collecting corresponding scan line image information from a plurality of scan lines in order”. Therefore, it is clear that Tsai discloses the black bias on a separate document.

In the present invention, however, the black patch and white shading plate is included in the scanner as mentioned in claims 1, 15 and 22. For example, in claim 1 it states: *An apparatus for correcting a scanning error in a flatbed scanner, the apparatus comprising: a white shading plate having a black patch.*

Therefore, Tsai teaches the black patch being on a separate document while the present invention includes the black patch on the scanner.

Therefore, in Tsai as seen in step 52, an extra step of inserting the document to be scanned with a black bias in the scanner. However, in the presently claimed invention, such an extra step is not needed. Furthermore, by placing a document in the scanner, there can be an

introduction of further alignment problems if the document for example is not located properly. However, as the black patch is located in the scanner for the present invention, such a problem is avoided.

### **Claims 2 and 16**

Regarding claim 2, which is allegedly representative of claim 16, the Examiner states that Tsai discloses wherein the information of said black patch comprises at least one of information of the edge lines of said patch read through said reading module and information of the intervals of said black patch, and the predetermined reference value includes a plurality of values (Col 3 Lines 15-26).

However, the predetermined reference value with the plurality of values for correction of scanning error is not disclosed in Tsai since Tsai in col. 4, lines 45-48 states that “each error value ER<sub>i</sub> is compared against *a predetermined gate value (TD)*”. Therefore, only a single value is used in the comparison for error in Tsai rather than a plurality of values as used in the present invention.

### **Claim 3**

For claim 3, which is allegedly representative of claim 20, the Examiner states that Tsai discloses controller correcting a scan start line using the result of comparing a predetermined value with a number of pixels corresponding to an interval by which said reading module is

moved from a top edge line of said black patch read through said reading module to a predetermined point (Fig 5; Col 3 Lines 15-20).

In Tsai, the top edge line is not necessarily used as P1, P2, P3 is a boundary point between the black and white region in general, but does not necessarily look at from a top edge line.

**Claims 5 and 19**

Considering claim 5, which is representative of claims 19, the Examiner states that Tsai teaches said controller setting a scan region based on the detection of a rightmost edge line of said black patch through said reading module and a position of a first pixel being read obtained during reading of said white shading plate to correct a scanning error for the position of the first pixel being read (Col 3 Lines 5-15).

However, Tsai does not look to reading the first pixel by reading the white shading plate of the scanner, but concerns the document included for scanning. Furthermore, the right most edge line is not necessarily disclosed in Tsai. Col. 3 mentions boundaries on the left side and right side, but this does not mean the right most edge. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981). The identical invention as arranged in the claim must be disclosed as mentioned in MPEP §2131.

**Claims 9, 10 and 21**

Regarding claim 9, the Examiner states that Tsai discloses said controller adjusting a scan rate based on predetermined right and left intervals with respect to the center of said black patch read through said reading module (Fig 7-8).

However, steps 50-96 do not disclose the adjusting of the scan rate or even the determination of the scan rate. No adjustment of the scan rate is given. Rather steps 50-96 determine the scanning misalignment as boundary and comparison to a gate value is made. Specifically, steps 50-76 include determination of the scan line misalignment as seen in figure 7 and steps 80-96 specifically shows how the boundary line is determined for determination of the scan line misalignment. Therefore, Tsai, unlike the present invention, the scan rate is not adjusted as arranged in the present claim.

**Claim 21**

Regarding claim 21, the Examiner states that Tsai teaches when predetermined right and left intervals with respect to the center of said black patch are detected, a scan rate is adjusted based on the result of comparing each of the detected predetermined intervals with a corresponding predetermined value (Col 3 Lines 5-15).

However, as seen in col. 3, lines 5-15, only the boundary points for the detection of misalignment is disclosed, but no disclosure as to the scan rate being adjusted and not with

regard to the intervals as claimed.

**Claim 11**

Considering claim 11, the Examiner states that Tsai teaches the predetermined reference value being set based on a pattern of said black patch (Col 2 Line 64 - Col 3 Line 15 and Col 4 Lines 45-56).

However, the set predetermined reference value for comparison with the read values of information is stated in step 62 in col. 5, line 7, as the “appropriate gate value (TD).” However, it is not clear if this concerns the pattern of the black patch. No specific disclosure is made concerning the gate value in Tsai and whether that specifically concerns the pattern of the black patch.

**Claim 12**

For claim 12, the Examiner states that it is inherent the apparatus comprises a memory for storing the predetermined value.

However, it is not necessarily inherent that the apparatus itself holds in its memory the predetermined value. Inherency, however, may not be established by probabilities or possibilities. As mentioned above, the mere fact that a certain thing may result from a given set of circumstances is not sufficient. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949,

1950-51 (Fed. Cir. 1999) (citations omitted).

The apparatus does not necessarily include the memory for predetermined value. For example, the value could be stored in a personal computer or other network device connected to the scanning device in Tsai. Tsai does not necessarily include the memory for storage of the predetermined value.

**Claim 13**

Further for claim 13, the Examiner states that Tsai teaches comprising a transparent glass on which a document is placed (Col 2 Lines 53-57); it is inherent the apparatus includes a buffer storing an image read through said reading module, with the controller controlling the output of the image stored in the buffer to correct the scanning error (Col 2 Lines 64 - Col 3 Lines 15 and Col 4 Lines 45-56).

However, Tsai discloses the determination of a misalignment error, but there is no specific disclosure on the technique of correcting including the controller controlling the output of the image specifically stored in the buffer to correct the scanning error. For example, the error can be passed on to a connected device which corrects for the error in the image through software on a connected personal computer, rather the device itself. Col. 2, lines 64-col. 3, line 15 and col. 4, lines 45-56 only concern the determination of misalignment error, but does not teach the correction as identically arranged in the present claim.

**Claim 25**

Regarding claim 25, the Examiner states that Tsai teaches detecting the information of said black patch further comprising of checking whether an interval of said white shading plate between a first edge of said black patch and a second edge of said black patch is detected to have white pixels (Col 3 Lines 16-37).

However, as mentioned above, the white shading plate of the scanner is not looked at by Tsai, but rather the black bias on the document to be scanned.

**RESPONSE TO ARGUMENTS IN MARCH 19, 2007 ADVISORY ACTION**

In response to the arguments contained in the February 20, 2007 Request for Reconsideration, the Examiner responds in the March 19, 2007 Advisory Action as follows:

“The request for reconsideration has been considered by does NOT place the application in condition for allowance because: Applicant’s arguments filed have been fully considered but they are not persuasive. Applicant argues the black path is in separate document to be scanned. The examiner finds this limitation to be taught in Tsai Col2 Lines 57-63 where the document 36 has a white background with a test paper that is a black bias 37. Second, Applicant argues only a single value is used in the comparison for error.,, rather than a plurality of values. In Cot 4 Lines 45-48, Tsai teaches, one value is used at a time however a plurality of values is compared against a predetermined gate value. Third, Applicant argues in Tsai, the top edge line is not necessarily used as P 1, P2, P3 is a boundary point between the black and white region in general, but does not necessarily look at from a top edge line. Examiner finds this means, as though not mandated, the top edge line can be used as boundary point between the black and white regions in general. Fourth, Applicant

argues, Tsai does not look to reading the first pixel by reading the white shading plate of the scanner, but concerns the document included for scanning. Upon further review, the Examiner finds this limitation to be taught in Col 3 Lines 5-15. Fifth, Applicant argues, no adjustment is given. Examiner would like to point applicant's attention to Col 1 Lines 22-31. Sixth, Applicant argues No specific disclosure is made concerning the gate value in Tsai and whether that specifically concerns the pattern of the black patch. Specific Disclosure is given at Col 2 Line 64-Col 3 Line 15 and Col 4 Line 45-56. Seventh, Applicant argues, the apparatus does not necessarily include the memory for predetermined value. However, evidence of memory can be found in Col 2 Line 64-Col 3 Line 15 and Col 4 Line 45-56."

Responding to the specific points raised by the Examiner above, as noted previously, the document 36 of Tsai is not part of the scanner as in the present invention but rather is a separate element used in conjunction with the scanner. Therefore, Tsai does not teach or suggest a white shading plate having a black patch as recited in the present claims.

With regard to the use of a single value in the comparison as recited in the present claims, the Examiner has argued that "one value is used at a time however a plurality of values is compared against a predetermined to gate value". However, one value of a plurality of values used at a time is not the same as the use of a single value in the comparison. Therefore, Tsai does not teach or suggest the use of a single value in the comparison as recited in the present claims.

With regard to the Examiner indicating that the top edge line can be used as a boundary point between the black and white regions, Appellant again argues that merely because an

element can be used in a manor corresponding to a recited limitation does not mean that it would be obvious to do so. The Examiner has used the wrong criterion here.

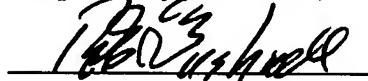
With regard to the fourth, fifth, and sixth arguments by the Examiner, it is again submitted that the cited portions of Tsai do not support the Examiner's allegations.

With regard to the memory for storing a predetermined value, it is again submitted that the cited portions of Tsai do not support the Examiner's allegations.

In conclusion, for the reason is noted above, it is submitted that Tsai does not teach or suggest the separately recited features of claims 1 and 15, 2 and 16, 3, 5 and 19, 9 and 21, 10, and 22 and accordingly, it is submitted that these claims, as well as the remaining rejected claims, are patentable over Tsai.

In view of the law and facts stated herein as well as all the foregoing reasons, Appellant believes that the rejection is improper and respectfully requests that the Board refuse to sustain the outstanding rejection of claims 1-3, 5, 9-16, 19 and 21-28.

Respectfully submitted,

  
Robert E. Bushnell  
Robert E. Bushnell,  
Attorney for the Appellant  
Registration No.: 27,774

1522 "K" Street N.W., Suite 300  
Washington, D.C. 20005  
(202) 408-9040

Folio: P56639  
Date: 5/21/07  
I.D.: REB/HMZ

## VIII. CLAIMS APPENDIX

### Claims 1-3, 5, 9-16, 19 and 21-28

1       1. (Original) An apparatus for correcting a scanning error in a flatbed scanner, the  
2       apparatus comprising:

3              a white shading plate having a black patch;

4              a reading module accommodating reading of said white shading plate and said black  
5       patch; and

6              a controller comparing information of said black patch read by said reading module with  
7       a predetermined reference value to correct the scanning error in the flatbed scanner.

1       2. (Previously Presented) The apparatus of claim 1, wherein the information of said  
2       black patch comprises at least one of information of the edge lines of said black patch read  
3       through said reading module and information of a plurality of intervals of said black patch, and  
4       the predetermined reference value includes a plurality of values.

1       3. (Previously Presented) The apparatus of claim 1, further comprised of said controller  
2       correcting a scan start line using the result of comparing a predetermined reference value with  
3       a number of pixels corresponding to an interval by which said reading module is moved from  
4       a top edge line of said black patch read through said reading module to a predetermined point.

1       5. (Original) The apparatus of claim 1, further comprised of said controller setting a  
2       scan region based on the detection of a rightmost edge line of said black patch through said

3 reading module and a position of a first pixel being read obtained during reading of said white  
4 shading plate to correct a scanning error for the position of the first pixel being read.

1 9. (Original) The apparatus of claim 1, further comprised of said controller adjusting  
2 a scan rate based on predetermined right and left intervals with respect to the center of said  
3 black patch read through said reading module.

1 10. (Original) The apparatus of claim 9, further comprised of said controller detecting  
2 the size of a region scanned by said reading module over the entire scan region based on a  
3 difference detected by comparing the predetermined right and left intervals with a  
4 predetermined reference value to adjust the scan rate.

1 11. (Original) The apparatus of claim 1, with the predetermined reference value being  
2 set based on a pattern of said black patch.

1 12. (Original) The apparatus of claim 1, further comprising a memory for storing the  
2 predetermined reference value.

1 13. (Original) The apparatus of claim 1, further comprising a transparent glass on which  
2 a document is placed; and  
3 a buffer storing an image read through said reading module,  
4 with the controller controlling the output of the image stored in the buffer to correct the  
5 scanning error.

1        14. (Original) The apparatus of claim 1, further comprised of said black patch including  
2        a center dividing said black patch into two equal patterns, said black patch being symmetric  
3        about the center line.

1        15. (Original) A method for correcting a scanning error in a flatbed scanner with a white  
2        shading plate including a black patch, the method comprising:

3              detecting information related to said black patch and an interval moved by a reading  
4        module, based on information obtained by reading said black patch using said reading module;  
5        and

6              correcting the scanning error according to the result of comparing the detected  
7        information related to said black patch with a predetermined reference value.

1        16. (Previously Presented) The method of claim 15, wherein the detected information  
2        related to said black patch comprises at least one of information of edge lines of said black  
3        patch and information of intervals, and the predetermined reference value includes a plurality  
4        of values.

1        19. (Original) The method of claim 15, further comprised of when a position at which  
2        a first pixel is read is detected while reading said white shading plate after detecting a rightmost  
3        edge line of said black patch, the scanning error is corrected by setting a scan region according  
4        to the result of comparing the position at which the first pixel is read with a predetermined  
5        reference value during the correction of the scanning error.

1           21. (Original) The method of claim 15, further comprised of when predetermined right  
2 and left intervals with respect to the center of said black patch are detected, a scan rate is  
3 adjusted based on the result of comparing each of the detected predetermined intervals with a  
4 corresponding predetermined value.

1           22. (Original) A method, comprising:  
2           detecting information with respect to the pattern of a black patch on a white shading  
3 plate included in a scanning apparatus; and  
4           comparing the information detected of the pattern of said black patch with a respective  
5 predetermined reference value to correct scanning errors, the respective reference value set  
6 according to the pattern of said black patch.

1           23. (Original) The method of claim 22, with the detecting information of said black  
2 patch further comprising of detecting of edge lines of said black patch.

1           24. (Original) The method of claim 22, with the detecting information of said black  
2 patch further comprising of checking the presence of black and white pixels while moving a  
3 reading module of said scanning apparatus.

1           25. (Original) The method of claim 22, with the detecting information of said black  
2 patch further comprising of checking whether an interval of said white shading plate between  
3 a first edge of said black patch and a second edge of said black patch is detected to have white

4 pixels.

1        26. (Original) The method of claim 25, with the information further comprising of  
2 extracting the number of pixels corresponding to an interval said reading module is moved  
3 vertically on said black patch.

1        27. (Original) The method of claim 26, with the step of comparing the information  
2 detected of said black patch with a respective predetermined reference value to correct scanning  
3 errors, further comprising of comparing the number of pixels corresponding to the interval said  
4 reading module is moved vertically on said black patch with the respective predetermined  
5 reference value being the number of pixels a reader moves vertically from a top edge of said  
6 black patch to the top edge of a transparent glass of the said scanner.

1        28. (Original) The method of claim 23, further comprising:  
2            detecting a first pixel being read while reading of said white shading plate; and  
3            detecting a pixel difference between where the first pixel is read and the point where the  
4            edge line has been detected.

## **IX. EVIDENCE APPENDIX**

None

**X. RELATED PROCEEDINGS APPENDIX**

None.